

1 **Amendment to the Claims**

2 **In the Claims:**

3 Please cancel Claims 3-7 and 13-40.

4 Please amend Claims 1 and 8 as follows:

5 1. (Currently Amended) A method of constructing a library of optically distinct reporter
6 labeled carriers, said method comprising the steps of:

7 (a) providing a plurality of carriers;

8 (b) providing a plurality of reaction vessels, such that at least one reaction vessel is
9 available for each unique member of the library to be constructed;

10 (c) providing a plurality of optically distinct reporters, such that at least some of the
11 plurality of optically distinct reporters are different from each other;

12 (d) in each reaction vessel, apportioning at least one carrier, such that any reaction
13 vessels that includes more than one carrier will include only identical carriers;

14 (e) in each reaction vessel, apportioning and at least one optically distinct reporter in
15 a predetermined unique combination, such that a unique combination of the at least one carrier
16 and the at least one optically distinct reporter is achieved in each reaction vessel; and

17 (e f) attaching said at least one optically distinct reporter to said at least one carrier in
18 each reaction vessel, by at least one of a physical attachment and a chemical attachment such that
19 each carrier in the same reaction vessel will have an identical set of optically distinct reporters
20 attached to it, each reaction vessel including a set of optically distinct reporter labeled carriers
21 that is uniquely different from the optically distinct reporter labeled carriers of each other
22 reaction vessel, the plurality of reaction vessels thereby defining a library of optically distinct
23 reporter labeled carriers.

24 2. (Original) The method of Claim 1, wherein at least one reaction vessel contains a
25 carrier that is optically distinct from others of said plurality of carriers in other reactions vessels,
26 and wherein no reaction vessel contains a mixture of optically distinct carriers.

27 3. (Cancelled)

28 4. (Cancelled)

29 5. (Cancelled)

30 6. (Cancelled)

1 7. (Cancelled)

2 8. (Currently Amended) A method of constructing a library of optically distinct reporter
3 labeled carriers, said method comprising the steps of:

4 (a) providing a plurality of optically distinct carriers;

5 (b) providing a plurality of reaction vessels, such that at least one reaction vessel is
6 available for each unique member of the library to be constructed;

7 (c) providing a plurality of optically distinct reporters, such that at least some of the
8 plurality of optically distinct reporters are different from each other;

9 (d) in each reaction vessel, apportioning at least one optically distinct carrier and at
10 least one optically distinct reporter in a predetermined unique combination, such that:

11 (i) any one of the plurality of reaction vessels that includes more than
12 one optically distinct carrier will include only identical optically distinct carriers; and

13 (ii) a unique combination of the at least one optically distinct carrier
14 and the at least one optically distinct reporter is achieved in each reaction vessel; and

15 (e) attaching said at least one reporter to said at least one carrier in each reaction
16 vessel, ~~by at least one of a physical attachment and a chemical attachment such that each~~
17 ~~optically distinct carrier in the same reaction vessel will have an identical set of optically distinct~~
18 ~~reporters attached to it, each reaction vessel including a set of optically distinct reporter labeled~~
19 ~~carriers that is uniquely different from the optically distinct reporter labeled carriers of each other~~
20 ~~reaction vessel, the plurality of reaction vessels thereby defining a library of optically distinct~~
21 ~~reporter labeled carriers.~~

22 9. (Previously Added) The method of Claim 8, wherein no reaction vessel contains a
23 mixture of different optically distinct carriers.

24 10. (Previously Added) The method of Claim 8, wherein said plurality of optically
25 distinct reporters and said plurality of optically distinct carriers are optically distinguishable
26 based on size.

27 11. (Previously Added) The method of Claim 8, wherein said plurality of optically
28 distinct reporters and said plurality of optically distinct carriers are optically distinguishable
29 based on intensity.

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1 12. (Previously Added) The method of Claim 8, wherein said plurality of optically
2 distinct reporters and said plurality of optically distinct carriers are optically distinguishable
3 based on shape.

4 13. (Cancelled)

5 14. (Cancelled)

6 15. (Cancelled)

7 16. (Cancelled)

8 17. (Cancelled)

9 18. (Cancelled)

10 19. (Cancelled)

11 20. (Cancelled)

12 21. (Cancelled)

13 22. (Cancelled)

14 23. (Cancelled)

15 24. (Cancelled)

16 25. (Cancelled)

17 26. (Cancelled)

18 27. (Cancelled)

19 28. (Cancelled)

20 29. (Cancelled)

21 30. (Cancelled)

22 31. (Cancelled)

23 32. (Cancelled)

24 33. (Cancelled)

25 34. (Cancelled)

26 35. (Cancelled)

27 36. (Cancelled)

28 37. (Cancelled)

29 38. (Cancelled)

30 39. (Cancelled)

1 40. (Cancelled)

2 Please add new Claims 41-48 as follows:

3 41. (New) The method of Claim 2, wherein at least one reaction vessel includes
4 optically distinct carriers that can be optically distinguished from carriers in other reaction
5 vessels based on size.

6 42. (New) The method of Claim 2, wherein at least one reaction vessel includes
7 optically distinct carriers that can be optically distinguished from carriers in other reaction
8 vessels based on shape.

9 43. (New) The method of Claim 2, wherein at least one reaction vessel includes
10 optically distinct carriers that can be optically distinguished from carriers in other reaction
11 vessels based on color.

12 44. (New) The method of Claim 2, wherein at least one reaction vessel includes
13 optically distinct carriers that can be optically distinguished from carriers in other reaction
14 vessels based on an intensity of color.

15 45. (New) The method of Claim 8, wherein at least one reaction vessel includes
16 optically distinct carriers that can be optically distinguished from carriers in other reaction
17 vessels based on size.

18 46. (New) The method of Claim 8, wherein at least one reaction vessel includes
19 optically distinct carriers that can be optically distinguished from carriers in other reaction
20 vessels based on shape.

21 47. (New) The method of Claim 8, wherein at least one reaction vessel includes
22 optically distinct carriers that can be optically distinguished from carriers in other reaction
23 vessels based on color.

24 48. (New) The method of Claim 8, wherein at least one reaction vessel includes
25 optically distinct carriers that can be optically distinguished from carriers in other reaction
26 vessels based on an intensity of color.--

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